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ABSTRACT

New Maryland State Board for Higher Education funding guidelines for public four-year institutions in Maryland are presented, along with information on the development of the guidelines. Four guidelines models were studied and evaluated by criteria endorsed by state and university officials. To derive the guidelines, each program area (institutional research, public service, academic support, institutional support, plant, student services, scholarships and fellowships) was discussed separately by the finance advisory committee. Discussions focused on relevant data from other states and assumptions underlying utilization of alternate formats, variables, and statistical techniques. The formula developed to meet the criteria recommends state funding based on a single set of rates applied to all institutions. The process to update the guidelines to reflect adequately the impact of inflation utilizes "Chase Econometrics" projections for increases in per capita income, the cost of fuel oil and gas, the cost of total durable goods, and the Consumer Price Index. The funding guidelines were evaluated using criteria on equity, different college roles/missions, productivity, and incentives. Guidelines for fiscal years 1984, 1985, 1986, and 1987 are shown. (Author/SW)

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The SBHE Guideline for Operating Budget Funding

ED264781

POSTSECONDARY EDUCATION RESEARCH REPORTS

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THE SBHE GUIDELINE

FOR

OPERATING BUDGET FUNDING

State Board for Higher Education
16 Francis Street
Annapolis, Maryland 21401

October, 1985

State of Maryland

STATE BOARD FOR HIGHER EDUCATION

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Executive Summary

The Governor's Task Force to Study Flexibility in Higher Education recommended that a committee co-chaired by the Department of Budget and Fiscal Planning and the State Board for Higher Education develop a set of funding guidelines for higher education. This report discusses the development of a new funding guideline for the public four-year institutions in Maryland, and presents the resulting guideline.

From funding guidelines used or proposed by other states, four guideline models were studied by the committee and evaluated by a set of criteria endorsed by the Commissioner of Higher Education, the presidents of the University of Maryland, Morgan State University, and St. Mary's College of Maryland, and the Executive Director of the Board of Trustees of the State Universities and Colleges. The formula developed to meet the criteria recommends State funding based upon a single set of rates applied to all institutions. The general formula model is the following:

> State General Fund Appropriation = Base + [Projected Student Credit Hours x Discipline Cost Matrix] + 40% [Sponsored Research] + [Rate x 5% of Adjusted ALABVE standard] + [Rate x Adjusted GSF]

The process to update the guideline to reflect adequately the impact of inflation utilizes Chase Econometrics projections for increases in per capita income, the cost of fuel oil and gas, the cost of total durable goods, and the Consumer Price Index. Guidelines for FY 1984, FY 1985, FY 1986, and FY 1987 are shown.

FY 1987 Guideline Development

The Governor's Task Force to Study Flexibility in Higher Education (the Curran Committee) recommended that a committee co-chaired by the Department of Budget and Fiscal Planning (DBFP) and the State Board for Higher Education (SBHE) including finance officers for each governing board and legislative fiscal analysts, develop a set of funding guidelines for higher education. In addition, the Task Force suggested that the Committee might use as models guidelines used for analytical purposes by the SBHE, formula elements used by DBFP, or any other set of guidelines widely in use in higher education. A Finance Advisory Committee was created in Spring, 1984 in response to the Curran Committee recommendation. This report discusses the development of a new funding guideline for the public four-year institutions in Maryland.

Background

Current budgetary practice in Maryland uses several methods to analyze higher education budget requests; responsibility for analysis of budget requests and funding recommendations is assigned to both the Department of Budget and Fiscal Planning and the State Board for Higher Education. The State Board for Higher Education uses a guideline approach in analyzing institutional budget requests. However, institutional requests must be submitted in a line-item format to DBFP for inclusion in the Governor's budget. DBFP analysis focuses heavily on objects of expenditure and incremental changes to the base. During the MARC

request process, the Department of Budget and Fiscal Planning review is focused on institutional requests for funds beyond the current year funding levels. This incremental approach to budgeting assumes that the current level of funding an institution receives is essentially the correct resource level for the institution's current activities. Consequently, detailed analysis is, for the most part, limited to changes to the base.

After the MARC has been set, the Fall budget review process of DBFP focuses on assuring that requests are within the MARC, and then more careful scrutiny is given to supplemental requests above the MARC level. This process of incremental budgeting leaves the vast majority of funds allocated to an institution unexamined from one year to the next. Unless radical shifts in expenditure patterns among line items occur, analysis tends to be limited to new positions requested, increases in particular objects of expenditure, and new initiatives for which the institution is seeking State funds.

Because the analysis used by DBFP focuses on the individual items that an institution wishes to purchase and the personnel it wishes to hire, institutions that are "successful" are those that request increases in expenditures for items which their budget analyst agrees are important. The incremental approach does not assess the overall adequacy of resources at an institution but establishes priorities for items that are funded jointly between the institution and DBFP. Thus DBFP and the institution share responsibility and accountability for decisions.

By contrast, guideline or formula analysis does not assume the prior year funding level should be the institution's base. Guideline or formula analysis typically is zero-based; the amount of funding recommended for an institution is a function of projected activity levels, not the prior year appropriation amount.

The guideline approach treats all institutions equitably. The need for resources and the adequacy of existing and requested funding are assessed using the same yardstick, the guideline, rather than by making individual judgments. The guideline method currently allows the SBHE to recommend a funding level for each institution and if funds were allocated using this method, would allow the institution to establish priorities and allocate its resources within that level . This method would place all responsibility for the outcome of the decisions on the President/Chancellor of the institution. There would be no diffusion of accountability between the institution and the state executive branch.

The charge from the Curran Committee allowed consideration of a wide array of approaches to funding higher education institutions. A review was made of the methods in use in other states, and a broad spectrum of alternatives was identified that varied from detailed line-item analysis of each institution's request to full formula funding resulting in a lump sum appropriation to the governing board or the campus. However, a majority of states used formulas or guidelines to determine some or all of the recommendations for higher education institutions.

After careful review the Finance Advisory Committee determined that new guidelines, that would be formularized in whole or in part, should be developed.

Guideline Criteria

Development of a new guideline was guided by several criteria endorsed by the Commissioner of Higher Education; the presidents of the University of Maryland, Morgan State University, and St. Mary's College of Maryland; and the Executive Director of the Board of Trustees of the State Colleges and Universities.

1. The funding guideline should identify, based on recognized standards for quality, the desired level of State General Funds to support the programs and services that the public higher education institutions are expected to provide the citizens of Maryland.

2. The guideline should recognize differences in institutional roles and missions by considering differences in the types and levels of programs offered by different institutions.

3. The guideline should enable comparisons to be made among similar programs at different institutions in order to provide for equitable treatment of all schools and to evaluate the equitable distribution of available state funds among public higher education institutions.

4. The guideline should not be excessively complex, given the nature of the institutions to be funded.

5. The guideline should be zero-based and focus on productivity. The guidelines should not be used in an incremental approach to funding in which expenditures in any year would be dependent mainly on expenditures in the previous year, regardless of institutional productivity.

6. The guideline should be only a plan for distribution of State General Funds to the campus and not represent an expenditure plan for the institution.

Application of the guideline produces a maintenance budget for the educational program at an institution. The guideline is not intended to account for an institution's special needs in areas such as desegregation, but rather represent the average level of expenditures for all institutions of a given size and mix of students and academic disciplines. The guideline will be used to calculate only the State General Fund requirement for an institution. Other resource needs of the institution will be met by a combination of student tuition and fees; gifts, grants, and contracts; and sales of educational and auxiliary services. Several guideline approaches were reviewed. The process for developing the guideline and the recommendation of the segment heads is discussed below; the appendix contains the four alternatives which were examined by the Finance Advisory Committee.

Guideline Development

To derive the guideline, each program area [Instruction, Research, Public Service, Academic Support, Institutional Support, Plant, Student Services, and Scholarships and Fellowships] was discussed separately by the Finance Advisory Committee. Discussions focused on relevant data from other states and the assumptions underlying utilization of alternate formats, variables, and statistical techniques. The Finance Advisory Committee determined that certain fixed and variable costs are associated with the operation of institutions of higher education. Fixed costs were to be derived from regression analysis and were to be used to moderate abrupt changes in variable costs caused by enrollment changes.

Although the Advisory Committee recognized that fixed costs could vary by institution, a determination was made that the fixed cost component would be the same for all institutions. In addition to fixed costs, other variables affect expenditures; the guideline could contain one or more of these variable components. The Finance Advisory Committee determined that the impact of enrollment driven variable costs should be minimized in consideration of an environment where some colleges and universities would be facing declining enrollments, some would be expanding enrollments and services to students, and some would be experiencing shifts in levels of enrollments and academic fields.

Another facet to the enrollment variable was the enrollment projection methodology. Earlier SBHE guidelines have been based on recent trends in actual enrollments at the various campuses. However, the possibility of going beyond simple trend analysis to reflect other goals for funding higher education institutions was recognized by the Committee. Under the proposed guideline recommendation institutions may negotiate adjustments to their actual student credit hour distribution based on projected enrollment changes consistent with the institution's role and mission as defined in the SBHE master plan, or new program initiatives approved by SBHE. For example, the University of Maryland-College Park could negotiate a shift in student credit hours toward upper division and graduate programs to help achieve the goal of attaining an enrollment mix more similar to peer institutions. Morgan could negotiate to increase student credit hours in engineering or in the graduate programs associated with its mission as an urban university. Coppin could negotiate increased science credit hours in anticipation of its new facility and an increased emphasis on science programs. Institutions anticipating short-term enrollment fluctuations as a result of increased admission or retention standards might negotiate a hold harmless enrollment level.

Institutions faced with longer term enrollment declines as a result of changing demographics require some assistance in adjusting to lower enrollment levels. In general, resources cannot be reduced as quickly as changes in enrollment may occur. Nor does each student lost result in a reduction in required

resources. Institutions could negotiate an enrollment range (e.g. plus or minus 3 percent) within which no adjustment in funding FTES would be made. Adjustments would be made only for fluctuations outside the range. Adjustments to funding FTES might be made only after the enrollment had fallen outside the range for two consecutive years.

The Committee strongly recommended that any negotiated enrollment patterns would have to be explicit and verifiable. Actual enrollment patterns would have to be monitored and if the predicted shifts did not occur, the negotiated patterns would revert to actual enrollments in subsequent funding years.

The Guideline Recommendation

The formula developed to meet the criteria recommends state funding based upon a single set of rates applied to all institutions. The general uniform formula developed is the following:

> State General Fund Appropriation = Base + [Projected Student Credit Hours x Discipline Cost Matrix] + 40% [Sponsored Research] + [Rate x 5% of Adjusted ALABVE standard] + [Rate x Adjusted GSF]

1. Base: This amount represents the base amount that an institution needs to operate. Considered in this amount are the fixed costs an institution has, such as a Chief Executive; Chief Financial, Academic, and Student Services Officers; and a minimum level of support personnel and operating costs.

2. Discipline Cost Matrix Times Credit Hours: For each campus, the credit hours generated for the academic year by level [lower division, upper division, graduate-1 and graduate-2] for each of the 24 two-digit HEGIS disciplines are multiplied by an amount delineated in a 4 x 24 matrix of costs. Lower division refers to courses numbered 000-299; upper division refers to courses numbered 300-499. Graduate-1 refers to masters, law , and specialist students and Graduate-2 refers to doctoral students. The cost matrix was developed from the instructional cost survey. The instructional cost survey was completed for FY 1984 by all of the public four-year institutions in Maryland.

3. 40% of Sponsored Research: Sponsored research expenditures are multiplied by 40 percent to represent the State support required for research. The 40 percent figure was derived from regression calculations.

4. $ times 5% of Adjusted ALABVEs: The adjusted ALABVE standard was determined by an algorithm that calculated the number of "Research" ALABVEs required by an institution. The percentage of doctoral programs at the institution was multiplied by the ALABVE standard to yield the number of research BVEs. This research number was weighted by .68 and added to the ALABVE standard number of volumes; then the sum was multiplied by $34.50, the FY 1984 cost of a book. The cost of research books was listed at $58 by Blackwell-North America, and the .68 weighting is derived from the relationship between the $58 and $34.50 costs of books [($58 - $34.50)/$34.50 = .68]. The number of American Library Association (ALA) standard Bound Volume

Equivalents (BVEs) is determined by an ALA-developed formula that includes factors for the numbers of students, faculty, and degree programs. The ALA has determined that 5 percent of the standard number of BVEs should be purchased by an institution each year to maintain its library collection.

5. $ times Adjusted GSF: Adjusted GSF were determined by calculating "research" GSF from the research NASF reported in the space inventory by using the total campus ratio of NASF/GSF. Calculated research GSF were then added to total GSF to yield adjusted GSF. Adjusted GSF are multiplied by the rate. The rate figure was determined to be the average amount it should cost to maintain one GSF. The University of Maryland determined that research space, because of heavy utilization, requires twice as much to maintain as does other space.

Guideline Application

Table 1 presents the Uniform Methodology Formula guideline that was developed by the Finance Advisory Committee.

Application of the guideline to each of the four-year public institutions is shown in Table 2 and amounts are compared to actual FY 1984 appropriations. Table 8 displays a comparison of the FY 1986 guideline with the FY 1986 appropriation. In FY 1986, the four-year public institutions were funded at 81.5 percent of the proposed guideline level of appropriations; the guideline would have required an additional $65.1 million at the eleven four-year public institutions to fund these institutions at 100 percent of the guideline. If all of higher education were

funded at a level equivalent to 100 percent of the guideline in FY 1986, a total of $100 million in additional General Funds would have been required. To determine if the guideline would provide sufficient resources to fund quality adequately, data were collected from three institutions: the University of California-Berkeley, University of Texas-Austin, and the University of Illinois at Urbana-Champaign. These three campuses are among the institutions that have been selected as aspirational peers of the University of Maryland; i.e., these three universities are among the top ten public institutions in the United States. They received state appropriations in FY 1984 that were at the guideline level, or below. Thus, the guideline would adequately fund the peer campuses and would provide an adequate amount of state resources for Maryland Universities.

Evaluation of the Guideline by the Criteria

The guideline developed was evaluated by the criteria established by the Segment Heads.

1. Equity

One of the fundamental reasons for using guidelines or formulas for funding recommendations is to help ensure the equitable distribution of available resources. In Maryland, equity has been defined in terms of providing comparable state funds for comparable activities. The guideline developed by the Finance Advisory Committee explicitly addresses the issue of equity in that the same rates are used for all institutions for all applicable components. For example, a lower division credit

hour in biology generates the same number of dollars at every institution. Any institution receiving sponsored research funds would receive the same percent of state support. Rates for ALABVE's and GSF are the same for all institutions.

2. Recognition of Differences in Role and Mission

Of equal importance to the equity criterion is the need for guidelines to recognize differences in role and mission.

The guideline recognizes differences in role and mission in a number of ways. The use of a student credit hour matrix with different rates by program area and level of instruction provides an allocation based on the precise student and program mix at each institution. The percent of sponsored research factor provides additional state support for those institutions engaged in significant amounts of sponsored research activity. ALABVE's and GSF have been weighted to recognize higher costs associated with providing support for doctoral programs and research activities.

3. Productivity as a Determinant of Funding Level

The guideline recognizes enrollment by level and by discipline, sponsored research activity, gross square feet and gross square feet for research, ALABVE's and additional allowance to support doctoral programs. This guideline is responsive to changes in instructional activity by program or level, and to increases in sponsored research productivity.

4. Incentives

The guideline yields a lump sum General Fund appropriation recommendation for each campus which is not tied to specific budget programs within the institution, and does not require that General Fund appropriation recommendations be determined by other revenue sources available to the institution. This approach establishes a level of State support and allows an institution to retain all additional revenue that it can acquire; General Funds are the first dollars or base level of support provided to an institution. This method does not include any disincentives to fund-raising activities.

5. Complexity and Implementation

The criteria state that guidelines should not be excessively complex. The Uniform Guideline applies the same rates to all institutions. The enrollment-driven portions of the formula are derived from the Instructional Cost Data (ICD), a very detailed and complex analysis. Most of the remaining data required are readily available from the institutions in Maryland. The only external data required are information on book costs for the ALABVE component.

Guideline Updates

1. Inflation Adjustments

To update the guideline to reflect adequately the impact of inflation on the guideline institutions, the following process is used:

The July Chase Econometrics projections are used to calculate inflation adjustments. Chase's projections for changes in per capita income are used to calculate "inflation" for salaries and wages. Fuel and utilities increases are based on increases in the cost of fuel oil and gas. "Total durable goods" price changes are used to calculate changes in the costs of equipment while projected differences in the Consumers Price Index are used to calculate changes in the costs of all other items.

Updating the guideline for "salary increases" is done by use of the Chase Econometrics projection for changes in per capita income. As a result of this methodology, in years where the statewide salary increase is greater than the increase projected for per capita income, the guideline will be adjusted at a lower rate of increase than that of salaries. The guideline for a year in which this occurs will show progression toward the state funding goal. In years when the increase in per capita income projected by Chase Econometrics is greater than the statewide salary increase, there will be an apparent regression from the goal.

To update the FY 1984 guideline to FY 1985, from FY 1985 to FY 1986, and from FY 1986 to FY 1987 the values shown in Table 3 were used. Guidelines updated by this process are shown in Tables 4, 5, and 6. Comparisons of appropriations to the guideline amounts for FY 1985 and FY 1986 are shown in Tables 7 and 8. Because of transfers of fringe benefits appropriations from the Department of Personnel to the campuses beginning in FY 1985, comparisons are shown with and without fringe benefits.

2. Recalibration

The Finance Advisory Committee will need to meet at least annually to review the adequacy and effectiveness of the guideline. Recalibration of the guideline will be necessary every two to three years to reflect changes in the condition of the colleges and universities.

Every few years, detailed cost studies of several components of institutional operation will be required. Annually, reviews of national data must be conducted to assess the competitive position of the public institutions in Maryland.

Institutional Accountability in a Guideline Funding Environment

A major concern that has been raised when guideline funding has been discussed is how institutions can be held accountable for their use of state tax resources when the institutions receive lump sum appropriations, the amount of which is determined by factors which have been decoupled from specific budget programs and institutional activities. The traditional

method of deviation analysis of objects of expenditure or comparisons of amounts appropriated for particular purposes compared to actual expenditures that is used currently by DBFP would no longer be meaningful or even possible in evaluating an institution's appropriations request.

The annual financial reports prepared for each institution by external accounting firms, and the periodic reviews by the legislative auditors will provide accountability with regard to financial practices and procedures at the institutions, as well as identification of any major financial problems such as deficit spending. In addition, the controls exercised by the State Comptroller's office through STARS will continue to be in place.

However, the area of greater concern is how policy makers will know what their higher education dollars are buying. To receive additional funding, institutions must show that additional productivity results or that the funds are purchasing items of value to the policy makers. In order to maintain accountability, a system of reporting must be developed that will communicate what higher education institutions are accomplishing in terms of outcomes. The higher education community will have to become specific about how well students are being educated, what services are being provided to the public, what research activities have been undertaken, and how higher education institutions are supporting economic development in their region and the state.

Certain measures currently are being used to provide information about institutions which may be used to evaluate and to assess institutional performance. Measures include SAT scores for entering freshmen, retention rates, and follow-up studies of the graduates. In addition, information concerning the sponsored research dollars at an institution, the awards received by faculty and the amount of private support an institution attracts may be used to evaluate institutional performance.

The development of additional reporting mechanisms that will provide policy makers with information necessary to make decisions about the adequacy of Maryland's system of higher education, and the future level of support they wish to provide, is a task that must be undertaken as a part of any guideline funding implementation. It is recommended that a task force be assigned to address these issues to complete a comprehensive guideline recommendation. The task force should be composed of representatives from all segments of higher education; its members should consult with policy makers in the legislative and executive branches as part of determining what kinds of reporting would be most useful in relating higher education outcomes to funding policies and levels.

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Table 1

FY 1984 GUIDELINE

$1,700,000 + DISCIPLINE COST MATRIX TIMES CREDIT HOURS + 40% OF SPONSORED RESEARCH + $34.50 TIMES 5% OF ADJUSTED ALA BVE STANDARD + $3.50 TIMES ADJUSTED GSF = TOTAL STATE APPROPRIATION

DISCIPLINE COST MATRIX

HEGIS CODE	DISCIPLINE	DOLLARS PER CREDIT HOUR LD	UD	G	G-2
0100	AGRICULTURE	$ 105	$ 123	$ 204	905
0200	ARCHITECTURE & PLANNING	$ 23	$ 130	$ 380	428
0300	AREA STUDIES	$ 36	$ 273	$ 101	748
0400	BIOLOGICAL STUDIES	$ 57	$ 92	$ 135	960
0500	BUSINESS	$ 31	$ 43	$ 94	335
0600	COMMUNICATIONS	$ 58	$ 103	$ 121	1,434
0700	COMPUTER SCIENCE	$ 164	$ 85	$ 137	923
0800	EDUCATION	$ 74	$ 114	$ 143	721
0900	ENGINEERING	$ 70	$ 86	$ 158	1,232
1000	ARTS	$ 83	$ 156	$ 348	828
1100	FOREIGN LANGUAGES	$ 52	$ 146	$ 93	1,023
1200	HEALTH SCIENCES	$ 68	$ 124	$ 264	561
1300	HOME ECONOMICS	$ 95	$ 135	$ 462	2,103
1400	LAW			$ 73	0
1500	ENGLISH	$ 42	$ 110	$ 191	1,330
1600	LIBRARY SCIENCE		$ 293	$ 184	376
1700	MATHEMATICS	$ 34	$ 75	$ 272	749
1800	MILITARY SCIENCE	$ 19	$ 17	$ 0	0
1900	PHYSICAL SCIENCE	$ 57	$ 114	$ 367	1,429
2000	PSYCHOLOGY	$ 45	$ 91	$ 116	621
2100	PUBLIC AFFAIRS	$ 42	$ 83	$ 128	710
2200	SOCIAL SCIENCE	$ 41	$ 73	$ 143	910
4900	INTERDISCIPLINARY STUDIES	$ 37	$ 76	$ 116	
9500	ORIENTATION; REMEDIAL	$ 68			

Table 2

Application of FY 1984 Guideline

	Base	Discipline Cost Matrix times Credit Hours	40% of Sponsored Research	$34.50 times 5% of Adj. ALA BVE Standard	$3.50 times Adj. GSF	Total	FY 1984 State Appropriations	State Approp. as a % of Total
University of Maryland								
College Park	1,700,000	81,331,308	17,524,079	5,909,919	19,677,088	126,142,394	86,007,903	68.18%
Eastern Shore	1,700,000	2,088,355	851,321	302,075	1,440,639	6,382,390	6,200,329	97.15%
Baltimore County	1,700,000	14,947,814	990,595	933,087	4,466,977	23,038,472	17,822,338	77.36%
Subtotal, U. of Md.	5,100,000	98,367,477	19,365,995	7,145,081	25,584,703	155,563,256	110,030,570	70.73%
Board of Trustees of the State Universities and Colleges:								
Bowie State	1,700,000	3,194,767	313,406	340,955	2,004,188	7,553,315	6,525,229	86.39%
Coppin State	1,700,000	4,150,522	0	354,971	1,542,002	7,747,495	5,930,370	76.55%
Frostburg State	1,700,000	6,235,952	0	365,709	2,393,853	10,695,514	9,016,794	84.30%
Salisbury State	1,700,000	7,043,943	0	361,632	1,680,266	10,785,841	7,516,904	69.69%
Towson State	1,700,000	21,842,603	55,323	779,027	5,053,797	29,430,750	20,637,592	70.12%
University of Baltimore	1,700,000	5,847,646	143,972	603,522	1,558,484	9,853,624	7,017,249	71.21%
Subtotal, BTSUC	10,200,000	48,315,433	512,702	2,805,816	14,232,589	76,066,540	56,644,138	74.47%
St. Mary's	1,700,000	2,346,372	0	201,834	857,703	5,105,909	3,786,707	74.16%
Morgan State	1,700,000	8,104,715	672,330	767,522	2,965,575	14,210,141	13,924,597	97.99%
Total	18,700,000	157,133,997	20,551,027	10,920,252	43,640,569	250,945,845	184,386,012	73.48%
U of California - Berkeley	1,700,000	113,679,865	42,119,187	8,878,782	33,936,000	200,313,834	204,058,863	101.87%
U of Texas - Austin	1,700,000	144,022,368	37,138,188	7,982,024	44,971,892	235,814,472	218,582,023	92.69%
U of Illinois-Urbana Champaign	1,700,000	143,526,999	44,398,190	7,898,637	40,906,271	238,430,097	196,341,707	82.35%

Table 3

Inflation Rates

Object	FY 1984-FY 1985	FY 1985-FY 1986	FY 1986-FY 1987
01	5.0%	6.0%	7.0%
02, 03, 04, 05	5.6%	5.5%	4.4%
06	6.0%	6.1%	6.0%
07, 08, 09	5.6%	5.5%	4.4%
10, 11	4.1%	5.6%	4.3%
12, 13, 14	5.6%	5.5%	4.4%
Total	**5.0636%**	**5.911%**	**6.439%**

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TABLE 4

FY 1985 GUIDELINE

$1,786,000 + DISCIPLINE COST MATRIX TIMES CREDIT HOURS + 40% OF SPONSORED RESEARCH + $36.25 TIMES 5% OF ADJUSTED ALA BVE STANDARD + $3.68 TIMES ADJUSTED GSF + STATE-FUNDED FRINGE BENEFITS = TOTAL STATE APPROPRIATION

DISCIPLINE COST MATRIX

HEGIS CODE	DISCIPLINE	DOLLARS PER CREDIT HOUR LD	UD	G	G-2
0100	AGRICULTURE	$ 110	129	214	951
0200	ARCHITECTURE & PLANNING	$ 24	137	399	450
0300	AREA STUDIES	$ 38	287	106	786
0400	BIOLOGICAL STUDIES	$ 60	97	142	1,009
0500	BUSINESS	$ 33	45	99	352
0600	COMMUNICATIONS	$ 61	108	127	1,507
0700	COMPUTER SCIENCE	$ 172	89	144	970
0800	EDUCATION	$ 78	120	150	758
0900	ENGINEERING	$ 74	90	166	1,294
1000	ARTS	$ 87	164	366	870
1100	FOREIGN LANGUAGES	$ 55	153	98	1,075
1200	HEALTH SCIENCES	$ 71	130	277	589
1300	HOME ECONOMICS	$ 100	142	485	2,209
1400	LAW	0	0	77	0
1500	ENGLISH	$ 44	116	201	1,397
1600	LIBRARY SCIENCE	0	308	193	395
1700	MATHEMATICS	$ 36	79	286	787
1800	MILITARY SCIENCE	$ 20	18	0	0
1900	PHYSICAL SCIENCE	$ 60	120	386	1,501
2000	PSYCHOLOGY	$ 47	96	122	652
2100	PUBLIC AFFAIRS	$ 44	87	134	746
2200	SOCIAL SCIENCE	$ 43	77	150	956
4900	INTERDISCIPLINARY STUDIES	$ 39	80	122	0
9500	ORIENTATION; REMEDIAL	$ 71	0	0	0

TABLE 5

FY 1986 GUIDELINE

$1,892,000 + DISCIPLINE COST MATRIX TIMES CREDIT HOURS + 40% OF SPONSORED RESEARCH + $38.39 TIMES 5% OF ADJUSTED ALA BVE STANDARD + $3.90 TIMES ADJUSTED GSF + STATE-FUNDED FRINGE BENEFITS = TOTAL STATE APPROPRIATION

DISCIPLINE COST MATRIX

HEGIS CODE	DISCIPLINE	DOLLARS PER CREDIT HOUR LD	UD	G	G-2
0100	AGRICULTURE	$ 117	137	227	1,007
0200	ARCHITECTURE & PLANNING	$ 26	145	423	476
0300	AREA STUDIES	$ 40	304	112	832
0400	BIOLOGICAL STUDIES	$ 63	102	150	1,068
0500	BUSINESS	$ 34	48	105	373
0600	COMMUNICATIONS	$ 65	115	135	1,596
0700	COMPUTER SCIENCE	$ 182	95	152	1,027
0800	EDUCATION	$ 82	127	159	802
0900	ENGINEERING	$ 78	96	176	1,371
1000	ARTS	$ 92	174	387	921
1100	FOREIGN LANGUAGES	$ 58	162	103	1,138
1200	HEALTH SCIENCES	$ 76	138	294	624
1300	HOME ECONOMICS	$ 106	150	514	2,340
1400	LAW	0	0	81	0
1500	ENGLISH	$ 47	122	213	1,480
1600	LIBRARY SCIENCE	0	326	205	418
1700	MATHEMATICS	$ 38	83	303	833
1800	MILITARY SCIENCE	$ 21	19	0	0
1900	PHYSICAL SCIENCE	$ 63	127	408	1,590
2000	PSYCHOLOGY	$ 50	101	129	691
2100	PUBLIC AFFAIRS	$ 47	92	142	790
2200	SOCIAL SCIENCE	$ 46	81	159	1,013
4900	INTERDISCIPLINARY STUDIES	$ 41	85	129	0
9500	ORIENTATION; REMEDIAL	$ 76	0	0	0

TABLE 6

FY 1987 GUIDELINE

$2,013,825 + DISCIPLINE COST MATRIX TIMES CREDIT HOURS + 40% OF SPONSORED RESEARCH + $40.86 TIMES 5% OF ADJUSTED ALA BVE STANDARD + $4.15 TIMES ADJUSTED GSF + STATE-FUNDED FRINGE BENEFITS = TOTAL STATE APPROPRIATION

DISCIPLINE COST MATRIX, FY 1987

HEGIS CODE	DISCIPLINE	LD	UD	G	G-2
0100	AGRICULTURE	124	146	242	1,072
0200	ARCHITECTURE & PLANNI	27	154	450	507
0300	AREA STUDIES	43	323	120	886
0400	BIOLOGICAL STUDIES	68	109	160	1,137
0500	BUSINESS	37	51	111	397
0600	COMMUNICATIONS	69	122	143	1,698
0700	COMPUTER SCIENCE	194	101	162	1,093
0800	EDUCATION	88	135	169	854
0900	ENGINEERING	83	102	187	1,459
1000	ARTS	98	185	412	981
1100	FOREIGN LANGUAGES	62	173	110	1,212
1200	HEALTH SCIENCES	81	147	313	664
1300	HOME ECONOMICS	113	160	547	2,491
1400	LAW	0	0	86	0
1500	ENGLISH	50	130	226	1,575
1600	LIBRARY SCIENCE	0	347	218	445
1700	MATHEMATICS	40	89	322	887
1800	MILITARY SCIENCE	23	20	0	0
1900	PHYSICAL SCIENCE	68	135	435	1,692
2000	PSYCHOLOGY	53	108	137	736
2100	PUBLIC AFFAIRS	50	98	152	841
2200	SOCIAL SCIENCE	49	86	169	1,078
4900	INTERDISCIPLINARY STU	44	90	137	0
9500	ORIENTATION; REMEDIAL	81	0	0	0

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TABLE 7

FY 1985 GUIDELINE AND FY 1985 ACTUAL EXPENDITURES

	Base	Discipline Cost Matrix times Credit Hours	40% of Sponsored Research	$36.25 times 5% of Adj. ALA BVE Standard	$3.68 times Adj. GSF	General-Funded Fringe Benefits	Total	FY 1985 Adjusted State Appropriations	State Approp. as a % of Total
University of Maryland:									
College Park	1,786,000	85,664,990	25,091,930	5,375,293	21,080,435	27,055,432	166,054,080	123,532,699	74.39%
Eastern Shore	1,786,000	2,482,308	1,368,126	335,318	1,714,332	1,303,296	8,989,380	8,160,677	90.78%
Baltimore County	1,786,000	16,269,616	1,220,304	983,972	4,696,000	4,827,624	29,783,516	25,271,587	84.85%
Subtotal	5,358,000	104,416,914	27,680,361	6,694,583	27,490,767	33,186,352	204,826,976	156,964,963	76.63%
Board of Trustees of the State Universities and Colleges:									
Bowie State College	1,786,000	3,668,546	179,886	356,908	2,235,858	1,669,973	9,897,171	8,619,542	87.09%
Coppin State College	1,786,000	4,141,070	0	369,279	1,621,305	1,602,268	9,519,922	8,386,114	88.09%
Frostburg State College	1,786,000	6,589,899	0	383,625	2,414,017	3,033,933	14,207,474	12,794,375	90.05%
Salisbury State College	1,786,000	7,596,531	0	386,180	1,773,274	2,462,861	14,004,847	10,584,800	75.58%
Towson State University	1,786,000	23,091,222	4,400	850,298	5,371,770	7,021,541	38,125,231	29,362,947	77.02%
University of Baltimore	1,786,000	6,380,777	168,371	633,958	1,638,634	2,192,123	12,799,863	9,910,546	77.43%
Subtotal	10,716,000	51,468,045	352,657	2,980,248	15,054,858	17,982,699	98,554,508	79,658,324	80.83%
St. Mary's College of Maryland	1,786,000	2,488,946	0	212,053	901,813	1,153,951	6,542,764	5,345,979	81.71%
Morgan State University	1,786,000	7,912,738	796,255	800,574	3,148,501	4,950,830	19,394,898	19,387,478	99.96%
Total	19,646,000	166,286,643	28,829,273	10,687,459	46,595,939	57,273,832	329,319,146	261,356,744	79.36%

NOTE: Excludes funds for enhancement of the historically blck colleges: UMES, $1,011,300; Bowie, $230,400; Coppin, $160,050; and Morgan State, $925,800.

TABLE 8

FY 1986 GUIDELINE AND FY 1986 APPROPRIATIONS

	Base	Discipline Cost Matrix times Credit Hours	40% of Sponsored Research	$38.39 times 5% of Adj. ALA BVE Standard	$3.90 times Adj. GSF	General-Funded Fringe Benefits	Total	FY 1986 State Appropriations	State Approp. as a % of Total
University of Maryland:									
College Park	1,892,000	90,567,543	27,200,000	5,764,531	22,364,297	29,349,531	177,137,902	137,282,566	77.50%
Eastern Shore	1,892,000	2,640,915	1,800,000	353,313	1,849,357	1,468,835	10,004,419	8,587,742	85.84%
Baltimore County	1,892,000	18,023,666	1,198,620	1,108,874	5,021,589	5,422,700	32,667,449	27,834,799	85.21%
Subtotal	5,676,000	111,232,124	30,198,620	7,226,718	29,235,242	36,241,066	219,809,770	173,705,107	79.03%
Board of Trustees of the State Universities and Colleges:									
Bowie State College	1,892,000	3,854,145	173,684	378,717	2,369,523	2,103,741	10,771,810	9,541,894	88.58%
Coppin State College	1,892,000	4,295,301	0	388,219	1,718,231	2,080,277	10,374,028	8,885,954	85.66%
Frostburg State College	1,892,000	7,221,153	0	409,621	2,558,334	3,153,066	15,234,174	13,521,294	88.76%
Salisbury State College	1,892,000	7,707,580	0	402,375	1,879,285	2,581,248	14,462,488	11,371,616	78.63%
Towson State University	1,892,000	24,145,963	8,000	916,753	5,692,908	7,913,422	40,569,046	31,510,152	77.67%
University of Baltimore	1,892,000	6,868,799	200,000	672,334	1,736,596	2,720,353	14,090,082	11,261,920	79.93%
Subtotal	11,352,000	54,092,941	381,684	3,168,020	15,954,877	20,552,107	105,501,628	86,092,830	81.60%
St. Mary's College of Maryland	1,892,000	2,692,290	0	224,629	955,726	1,248,734	7,013,380	5,806,540	82.79%
Morgan State University	1,892,000	8,636,482	731,534	913,114	3,251,492	4,715,690	20,140,312	21,799,930	108.24%
Total	20,812,000	176,653,837	31,311,838	11,532,481	49,397,338	62,757,597	352,465,090	287,404,407	81.54%

NOTE: Appropriations exclude enhancement funding for the historically black campuses: UMES, $652,611; Bowie, $220,400; Coppin, $150,000; and Morgan State, $1,827,532.

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APPENDIX

Guideline Models

1. National Comparison Model.

This approach defines the goal for state funding for Maryland's institutions to be the national 75th percentile of state appropriation per student for public institutions of similar size and type. Implementation of this approach requires the use of HEGIS financial reports and enrollment data from the National Center for Education Statistics. National data can be disaggregated by enrollment level, public versus private, and type of institution (i.e. research universities, comprehensive colleges, baccalaureate). The general guideline proposed was the following:

> State General Fund Appropriation = Projected FTES x 75th percentile per student state appropriation for comparison group.

2. The Two-Tiered Formula Model.

This approach recommended funding based on a formula. Rates for average faculty salaries, support costs, library expenditures, and support of plant vary, depending upon whether the institution offers doctoral degrees. One set of rates would apply to the University of Maryland guideline campus and Morgan State University and a second set of rates would apply to St. Mary's College and the Board of Trustees of the State Universities and Colleges' institutions. The general two-tiered formula was:

State General Fund Appropriation = [FTEF x Average Salary x Support] + [$40,000 x Number of Degree Programs] + [ALABVE x Rate] + [GSF x Rate]

FTEF = Total Credit hours by level divided by instructional cost study weights (LD = 646.5, UD = 411.3, Graduate = 228.7, Grad Research = 46.56) + 10

Number Degree Programs = number of four digit HEGIS degree programs at bachelors, masters, and doctoral levels

ALABVE = 5 percent of ALA standard collection size

GSF = Non-auxiliary gross square feet

3. The Uniform Formula Model.

This approach recommends state funding based upon a single set of rates applied to all institutions. The general uniform formula was:

State General Fund Appropriation = Base + [Projected SCH x Discipline Cost Matrix] + [Percent of Sponsored Research] + [Rate x 5% of Adjusted ALABVE standard] + [Rate x Adjusted GSF]

Discipline Cost Matrix is derived from the 1984 Instructional Cost Study

Adjusted ALABVE = ALABVE + allowance for percent of doctoral programs

Adjusted GSF = Total non-auxiliary GSF + Research GSF

4. The Mixed Methodology Model.

This approach would recommend state appropriations based on formulas for instruction and libraries, and based on incremental analysis for the remainder of the institution's budget. The general mixed methodology model was:

State General Fund Appropriation = [FTEF x Average Salary x Support] + [5% ALABVE x Book Cost] + [Prior Year Appropriation - (FTEF Amount + ALABVE Amount) ± Analyst Recommendation]